Appendix D--The IRF Market Basket

Section 1886(j)(3)(C) of the Act requires the Secretary to establish an increase factor (for purposes of setting prospective payment system rates) based on a market basket index. The proposed market basket includes both operating and capital costs of rehabilitation facilities (that is, freestanding rehabilitation hospitals and rehabilitation hospital units). The index currently used for operating costs for rehabilitation facilities is the excluded hospital market basket. This market basket is based on 1992 cost report data and includes Medicare participating rehabilitation, long term care, psychiatric, cancer, and children's hospitals. Since freestanding rehabilitation hospitals are a component of the excluded hospital market basket, this index most closely reflects the cost shares of rehabilitation facilities. Because the excluded hospital market basket only includes operating costs, we are proposing to use the excluded hospital market basket with the addition of a capital portion to the index. We provide a brief explanation of the methodology used to develop our proposed index for rehabilitation facilities. We refer to this index as the excluded hospital (with capital) market basket. In the following discussion we describe: the methodology used to determine the operating portion of the market basket, the methodology used to determine the capital

portion of the market basket, and additional analyses that help support the extent to which rehabilitation cost shares are reflected in the market basket that we are proposing.

The operating portion of the excluded hospital market basket consists of major cost categories and their respective weights. The major cost categories include wages, benefits, drugs, and a residual. The weights for the major cost categories are developed from the Medicare cost reports for FY 1992. The cost report data used includes those hospitals excluded from the inpatient hospital prospective payment system where the Medicare average length of stay is within 15 percent (higher or lower) of the total facility average length of stay. Limiting the sample in this way provides a more accurate reflection of the structure of costs for Medicare. The detailed cost categories are derived from the Asset and Expenditure Survey, 1992 Census of Service Industries, by the Bureau of the Census, Economics and Statistics Administration, U.S. Department of Commerce. This is used in conjunction with the 1992 Input-Output Tables published by the Bureau of Economic Analysis, U.S. Department of Commerce. A more detailed description of the development of this index can be found in our final rule, Medicare Program; Changes to the Hospital Inpatient Prospective Payment Systems and Fiscal

Year 1998 Rates; published in the **Federal Register** at 62 FR 45965-45996, on August 29, 1997.

As previously stated, the market basket we are proposing needs to reflect both operating and capital costs. Capital costs include depreciation, interest, and other capital-related costs. The cost categories for the capital portion of the market basket that we are proposing is developed in a similar manner as those for the inpatient hospital prospective payment system capital input price index, which is explained in the August 30, 1996 **Federal Register**. We calculated weights for capital costs, using the same set of Medicare cost reports used to develop the operating share for excluded hospitals. The resulting capital weight for the 1992 base year is 9.080 percent.

Because capital is consumed over time, depreciation and interest costs in the current year reflect both current and previous capital purchases. We use vintage weighting of current and previous capital price changes to capture this effect. Vintage weighting, which is explained in the August 30, 1996 **Federal Register** (61 FR 46197 through 46203), is the process of weighting price changes for individual years in proportion to that year's share of total purchases still being consumed.

In order to vintage weight the capital portion of the index as described above, the average useful life of both

assets and debt instruments (for example, a loan, bond, or promissory note) needs to be developed. For depreciation expenses, the useful life of fixed and movable assets is calculated from the Medicare cost reports for excluded hospitals, including freestanding rehabilitation hospitals. The average useful life for fixed assets is 21 years and the average useful life for movable assets is 13 years. For interest expenses, we use the same useful life of debt instruments used in the hospital prospective payment system capital input price index. We believe that this useful life is appropriate, because it reflects the average useful life of hospital issuances of commercial and municipal bonds from all hospitals, including rehabilitation facilities. The average useful life of interest expense is determined to be 22 years. After the useful life is determined, a set of weights is calculated by determining the average proportion of depreciation or interest expense incurred during any given year during the useful life. This information is developed using the Medicare cost reports. These calculations are the same as those described for the inpatient hospital prospective payment system capital input price index in the August 30, 1996 **Federal Register**. The price proxies for each of the capital cost categories are the same as those used for the inpatient hospital prospective payment system capital input price index. The

cost categories, price proxies, and base-year fiscal year 1992 weights for the excluded hospital (with capital) market basket are presented in Table 1. The vintage weights for the index are presented in Table 2.

TABLE 1.--HCFA Excluded Hospital Input Price Index with Capital (FY 1992) Structure and Weights

Cost Category	Price/Wage Variable	Weights (%) Base-Year: 1992
TOTAL		100.000
Compensation	-	57.935
Wages and Salaries	HCFA Prospective payment system Occupational	47.417
Employee Benefits	HCFA Prospective payment system	10.519
Professional fees: Non-Medical	ECI - Compensation: Prof. & Tech.	1.908
Utilities	-	1.523
Electricity	WPI - Commercial Electric Power	0.916
Fuel Oil, Coal, etc.	WPI - Commercial Natural Gas	0.365
Water and Sewerage	CPI-U - Water & Sewage	0.243
Professional Liability Insurance	HCFA - Prof. Liab. Prem.	0.983
All Other Products and Services	-	28.572
All Other Products	-	22.027
Pharmaceuticals	WPI - Prescription Drugs	2.791
Food: Direct Purchase	WPI - Processed Foods	2.155
Food: Contract Service	CPI-U - Food Away fr. Home	0.998
Chemicals	WPI - Industrial Chemicals	3.413
Medical Instruments	WPI - Med. Inst. & Equip.	2.868
Photographic Supplies	WPI - Photo Supplies	0.364
Rubber and Plastics	WPI - Rub. & Plast. Products	4.423
Paper Products	WPI - Convert. Paper and Paperboard	1.984
Apparel	WPI – Apparel	0.809
Machinery and Equipment	WPI - Mach. & Equipment	0.193
Miscellaneous Products	WPI - Finished Goods	2.029
All Other Services	-	6.544
Telephone	CPI-U - Telephone Services	0.574
Postage	CPI-U – Postage	0.268
All Other: Labor Intensive	ECI - Compensation: Service Workers	4.945
All Other: Non-Labor Intensive	CPI-U - All Items (Urban)	0.757
Capital-Related Costs	-	9.080
Depreciation	-	5.611
Fixed Assets	Boeckh-Institutional Construction: 21 year useful life	3.570
Movable Equipment	WPI - Machinery & Equipment: 13 year useful life	2.041
Interest Costs	-	3.212
Non-profit	Avg. Yield Municipal Bonds: 22 year useful life	2.730
For-profit	Avg, Yield AAA Bonds: 22 year useful life	0.482
Other Capital-Related Costs	CPI-U - Residential Rent	0.257

*The wage and benefit proxies are a blend of 10 employment cost indices (ECI). A detailed discussion of the price proxies can be found in the August 30, 1996 **Federal Register** final rule.

TABLE 2.--HCFA Excluded Hospital Input Price Index with Capital (FY 1992) Vintage Weights

Year	Fixed Assets (21 year weights)	Movable Assets (13 year weights)	Interest: Capital-related (22 year weights)
1	0.0201	0.0454	0.0071
2	0.0225	0.0505	0.0082
3	0.0225	0.0562	0.0100
4	0.0285	0.0620	0.0119
5	0.0301	0.0660	0.0139
6	0.0321	0.0710	0.0161
7	0.0336	0.0764	0.0185
8	0.0353	0.0804	0.0207
9	0.0391	0.0860	0.0244
10	0.0431	0.0923	0.0291
11	0.0474	0.0987	0.0350
12	0.0513	0.1047	0.0409
13	0.0538	0.1104	0.0474
14	0.0561		0.0525
15	0.0600		0.0590
16	0.0628		0.0670
17	0.0658		0.0742
18	0.0695		0.0809
19	0.0720		0.0875
20	0.0748		0.0931
21	0.0769		0.0993
22			0.1034
Total	**1.0000**	**1.0000**	**1.0000**

We further analyzed the extent to which the weights in the excluded hospital (with capital) market basket that we are

proposing reflects the cost weights in rehabilitation hospitals; particularly since more than 50 percent of excluded hospitals are psychiatric hospitals. For this purpose, we conducted an analysis comparing the cost weights of rehabilitation hospitals to the cost weights for excluded hospitals. We analyzed the variations of major costs, such as wages, drugs, and capital for rehabilitation and excluded hospitals. This analysis showed that while these weights differed slightly between rehabilitation hospitals and excluded hospitals, the difference is very small. When these weights are substituted into the market basket structure for sensitivity analysis, the effect is never more than 0.2 percentage points in any given year. This difference is less than the 0.25 percentage point criteria that determines whether a forecast error adjustment under the inpatient hospital prospective payment system is warranted. We conducted this analysis in both the base year (FY 1992), and for the most recent set of cost reports (FY 1997) to determine if the difference in weights changed over time. Again, the differences were very small. Based on this analysis, we concluded that using the excluded hospital (with capital) market basket for the IRF prospective payment system will provide a reasonable measure of the price changes facing rehabilitation hospitals. We request comments on any other data sources that may be available to

provide detailed cost category information on rehabilitation hospitals, or on data sources for cost categories in rehabilitation units.